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Data Sheet

August 15, 2026

AGILENT / KEYSIGHT

Agilent/Keysight 11982A

HP Agilent 11982A Amplified Lightwave Converter 1200 to 1600 nm 15 GHz The HP/Agilent 11982A isaPIN-plus-preamp O/E converter. OEM 11982A data sheet lists 1200 to 1600 nm, DC to 15 GHz optical / DC to 11 GHz electrical bandwidth, greater than 200 V/W conversion gain (300 V/W nominal), 30 pW/sqrt(Hz) NEP, greater than 23 dB optical return loss with HMS-10/Diamond, and 10 mW (+10 dBm) maximum safe average optical input. Front-end for spectrum analyzers, oscilloscopes, BERTs, and network analyzers characterizing lightwave systems. The HP/Agilent 11982A isaPIN-plus-preamp O/E converter. OEM 11982A data sheet lists 1200 to 1600 nm, DC to 15 GHz optical / DC to 11 GHz electrical bandwidth, greater than 200 V/W conversion gain (300 V/W nominal), 30 pW/sqrt(Hz) NEP, greater than 23 dB optical return loss with HMS-10/Diamond, and 10 mW (+10 dBm) maximum safe average optical input. Front-end for spectrum analyzers, oscilloscopes, BERTs, and network analyzers characterizing lightwave systems. DC-coupled amplified O/E to 15 GHz optical



MODEL

**Agilent / Keysight
11982A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

11982A

LISTING

<https://aumictechlabs.com/products/11982a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Agilent/Keysight 11982A is an amplified lightwave converter that transforms optical signals into electrical outputs for measurement and characterization of lightwave systems and components. It combines a PIN photodetector with a low-noise, DC-coupled preamplifier to deliver a versatile analog front-end suitable for both frequency-domain and time-domain analysis

across a broad optical spectrum. Technical Specifications Optical Performance Wavelength range: 1200 nm to 1600 nm Optical bandwidth: DC to 15 GHz Impulse response (FWHM): 29.4 ps Input optical reflection: 0.05% Maximum safe optical input power: 10 mW (+10 dBm) average Maximum operating optical input power: 1.5 mW (+1.76 dBm) peak Electrical Performance Conversion gain: 300 V/W Output voltage range: > 700 mV into 50 ohms Output offset voltage: 11 dB (0.1 to 12 GHz) Output harmonic distortion: > 41 dB below fundamental (output < -10 dBm) Waveform aberrations: < 20% peak-to-peak Connectors & Physical Optical input: Single Mode Fiber connectors (Diamond HMS 10, FC/PC, ST, DIN) Electrical output: APC 3.5 male, 50 ohms nominal Dimensions: 368 mm × 213 mm × 102 mm; 3.76 kg Operating temperature: 0°C to +55°C Storage temperature: -40°C to +75°C Relative humidity: up to 95% (40°C ambient) Power supply: 100–240 V (±10%), 47–63 Hz; < 75 VA consumption Key Features Low-noise preamplifier with DC coupling enables direct measurement of optical modulation Minimal output offset (< 1 mV) suitable for precision analog measurements High gain (300 V/W) supports detection of weak optical signals Electrical output impedance matched to 50 ohms for direct connection to standard instrumentation Calibration chart included with each unit for frequency response and responsivity reference Typical Applications Optical modulation analysis and eye diagram measurement High-speed optical communication system characterization Lightwave component testing and validation Time-domain and frequency-domain optical signal analysis Compatibility & Integration The 11982A integrates directly with Agilent/Keysight spectrum analyzers, oscilloscopes, bit-error-rate testers, and network analyzers. Optional accessories include the 11980A Fiber-Optic Interferometer, 11742A Blocking Capacitor, 87441 Family SDH/SONET/Fibre Channel Filters, and 81000xl Series optical interface connectors.

11982A Characteristics / Specifications

PARAMETER	VALUE
Model	11982A
Instrument Type	Amplified lightwave converter
Wavelength Range	1200 nm to 1600 nm
Electrical Bandwidth	dc to 11 GHz characteristic
Fwhm	29.4 ps calculated from 0.44/BWopt
Conversion Gain Minimum	greater than 200 V/W plus or minus 20 percent
Conversion Gain Nominal	300 V/W
Noise Equivalent Power	30 pW per sqrt Hz characteristic
Input Return Loss	greater than 23 dB characteristic with HMS-10/Diamond
Aberrations	less than 20 percent peak to peak characteristic
Harmonic Distortion	greater than 41 dB below fundamental
Maximum Safe Average Optical Input	10 mW (+10 dBm)
Maximum Operating Peak Optical Input	1.5 mW (+1.76 dBm)
Output Voltage Range	greater than 700 mV into 50 ohm
Output Offset Voltage	less than 1 mV into 50 ohm
Output Electrical Return Loss 0.1 To 12 Ghz	greater than 11 dB characteristic
Mass	3.76 kg (8.3 lb)
Height	102 mm
Manufacturer	HP Agilent Keysight
Mechanical Package	benchtop O/E converter
Frequency Response Correction	code 001 menus for 8593E/8594E/8595E
Bandwidth	dc to 15 GHz characteristic
Conversion Gain	Minimum: greater than 200 V/W plus or minus 20 percent
Return loss	greater than 23 dB characteristic with HMS-10/Diamond

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Notes	
From Agilent 11982A Amplified Lightwave Converter data sheet. Optical connector interface is ordered	

separately (81000xI series). NEP of $30 \text{ pW}/\sqrt{\text{Hz}}$ equals about 3.7 uW in a 15 GHz bandwidth.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.